Sulpicius Severus de B. Martino loquens ait, gloriam martyris eum adeo affectaffe, ut, fi licuiffet, *equuleum fponte afcendiffet* [a] ; machinae figura ac ratio fufpenfionis, quemadmodum id facere potuiffet, aperte fatis oftendunt : in furca autem fe ipfum nemo fufpendere potuit.

In fumma autem, cum tota hujufce rei probatio veterum fcriptorum teftimoniis praecipue nitatur, ut plura adferre, quae haud parva copia fefe obtulerunt, fupervacaneum duximus ; ita nec pauciora ad plenam ejus explicationem fufficere exiftimavimus. Verum quaecunque de ea apud antiquos leguntur,uni aut alteri fpeciei fupra defcriptae facile tribui poffunt.Qui ad auctoris igitur aetatem, et diverfos loquendi modos diverfis temporibus de equuleo ufurpatos attenderit ; nihil, opinor, difficultatis in pofterum inveniet, quid de hoc tormenti genere ftatuere debeat ; in quo explicando tot viri eruditi hactenus fe fruftra torferunt.

[a] Epift. 2.

V. *An Account of a Treatife entituled*, Calculations and Tables relating to the attractive Virtue of Loadftones, *&c. Printed* Anno 1729.

THE Author, (the Hon. Lord *Paifley*) by feveral Experiments very carefully made, has obferved, that if two Loadftones are perfectly homogeneous, that is, if their Matter be of the fame fpecifick Gravity, and of the fame Virtue in all Parts of one Stone, as in the other, and that like Parts of their Surfaces are cap'd or arm'd with Iron, then the Weights they fuftain will be as the Squares of the Cube Roots of the Weights of the

Load-

Loadſtones; that is, as their Surfaces. Upon this Principle the Tables are formed. The firſt Column of theſe Tables is in common to the four following, and helps to ſhew how many times its Weight any Loadſtone ſuſtains.

In the ſecond, third, fourth and fifth Columns, are the Weights of Loadſtones in different Denominations. The ſecond, entituled Grains, reaches Grain by Grain to 480 Grains, or one Ounce, and will ſerve for any Loadſtone, whoſe Weight does not exceed one Ounce. The third reaches, by Penny-weights, up to two Pounds, or 480 Penny-weights, and therefore ſerves for any Stone that weighs not leſs than one Penny-weight, nor more than two Pound. The fourth Column reaches, by Ounces, up to forty Pounds, or 480 Ounces, and therefore will ſerve for any Stone not exceeding that Weight. The fifth ſerves from one to 480 Pounds. The ſixth Column entituled, Weight ſuſtained, is in common to the four preceding; and the Numbers in this Table, if they were divided by 10, would be the Squares of the Cube Roots of the Numbers in natural Order, from 1 to 480, as they are found in the Column of Pounds. But theſe Squares of the Cube Roots are here multiplied by ten, becauſe a Loadſtone of the very worſt Sort, if it weighs but one Grain, will ſuſtain ten Grains; and ſo theſe Tables, by ſimple Inſpection, ſhew what Number of Grains any Loadſtone of that worſt Character would ſuſtain, if the Stone weigh not more than 480 Grains, or one Ounce. The Numbers in the firſt Column entituled, How often its Weight, are proportional to the Reciprocals of the Cube Roots of the natural Numbers, and are form'd by dividing the Numbers of the ſixth Column, by
the

the correfponding natural Numbers, as they are found in the Column of Pounds.

For the greater Convenience of Calculation, his Lordfhip has added Tables ; firft of Decimal Parts for Penny-weights, Ounces, and Pounds, in order to lofe as little as poffible of the Fractions, in the feveral Calculations. The next are Tables of Grains, Penny-weights, Ounces, and Pounds, which readily fhew how many of each Denomination are contained in the others. The Tables entituled, From Grains to Penny-weights, &c. and the others from the feveral Denominations to others, are of Ufe for carrying the Computation readily from any one Denomination to another: And laftly, the Tables at the Bottom of thefe laft mention'd are of the like Ufe, for the ready finding the Value in Money of any Loadftone, from the Numbers proper to Grains, to Penny-weights, to Ounces, and to Pounds.

The Honourable Author then proceeds to explain the Ufe of thefe Tables, by Inftances under each Denomination. Thus, if a Loadftone does not exceed one Ounce, or 480 Grains, the particular Weight of the Stone, with the Weight it fuftains, being known, he reduces the Weight fuftained to Grains, by the Help of the Table of Grains. Then looking into the Column of Grains for the Weight of the Stone, againft it, in the Column of Weight fuftained, he finds the Number of Grains, which a Stone of the worft Sort of this Weight would fuftain ; and then dividing the known Number of Grains which this particular Stone will fuftain, by the Number of Grains expreffed in the Column, the Quotient fhews the Character of Goodnefs in the Stone propofed ; and by the Help of this Number may be known what Weight any other
Stone.

Stone of equal Goodnefs with this would fuftain, let its Weight be lefs or more, provided it does not exceed one Ounce, or 480 Grains. For looking into the fecond Column for the Weight of the Stone, and having found againft it, in the fixth Column, the Weight fuftained by a bad Stone, if you multiply the Quotient above found, which fhews the Character of Goodnefs, by the Number in the Tables expreffing the Weight fuftained, the Product is the Number of Grains this particular Stone will fuftain.

If a Stone of the fame Character weighs more than one Ounce, or 480 Grains, and lefs than two Pound, to know what Weight this will fuftain, the Computation muft be transferred from the Column of Grains to that of Penny-weights. Now fince one Penny-weight is equal to twenty-four Grains, and the Weight fuftained is to be expreffed, not in Grains, but in Penny-weights, the former Number, which gives the Character of Goodnefs of the Stone for Grains, muft be altered, to do the fame thing for Penny-weights. Multiplying therefore this Number by the Reciprocal of the Cube Root of 24, the Number of Grains contained in one Penny-weight (and the Numbers in the Tables are formed accordingly) the Product gives the Number fhewing the Character of Goodnefs in this Stone, which being found, the remaining Part of the Operation is the fame as in the former.

If a Loadftone exceeds 480 Penny-weights, and is lefs than forty Pound, we muft in like manner find the Number of the Stone for Ounces; which may be done either by the Number already found for Grains, multiplying it by the Number againft Unit in the Table from Grains to Penny-weights, or by the Number for Penny-weights, multiplying it by the Number
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ber againſt Unit in the Table from Penny-weights to Ounces, and the Product is the Characteriſtick Number of this Stone. Proceeding therefore as in the firſt Inſtance, the Weight it will ſuſtain will be found.

The Column of Pounds is only uſeful where a Loadſtone's Weight exceeds forty Pound, or 480 Ounces, in which Caſe the ſame Method muſt be uſed as in the others.

To know how many times a Loadſtone will take up its own Weight, multiply the Number proper to the Denomination in Uſe, by the Number in the firſt Column (entituled, How often its Weight) which is againſt the Weight of the Stone in the Column of that Denomination.

His Lordſhip cloſes his Account with explaining the Uſe of the Tables relating to the Value of Loadſtones in Money ; and this he ſuppoſes to be in the compound Proportion of the Goodneſs of the Stone, and of the Weight it ſuſtains ; becauſe if two Loadſtones take up the ſame Weight, the leſſer is more valuable, as it does more in Proportion to its Bulk, and what better Rule to eſtimate the Value by, than the Goodneſs of the Stone? On the other Hand, if the Stones are in Nature equally good, but ſuſtain different Weights, it is reaſonable, that their Value ſhould be according to the Weights they ſuſtain. Both theſe Circumſtances therefore being conſidered together, in order to find the Value of any Loadſtone by the Tables, we muſt multiply the characteriſtick Number for the Stone, by the Number entituled, Value in Money, taking this Value in Money from the particular Denomination that the Stone comes under ; and this Product will be the Value, *per* Ounce, of what the Stone ſuſtains. Then mul-
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tiplying this Value *per* Ounce, by the Number of Ounces the Stone fuftains, will give the Value in Money of the Stone propofed.

VI. *An Account of a Book entituled,* Jo. Frider. Weidleri Obfervationes Meteorologicæ & Aftronomicæ, Annorum 1728 & 1729, *&c.* Wittembergæ, Anno 1729.

THE Author, after dedicating his Tracts to the Royal Society, gives a Defcription of the particular Sort of Barometer, Thermometer, Hygrometer, and Hyetometer, which he made ufe of in the fubfequent Obfervations. The firft of thefe is a Diary of the Weather, from the Vernal Equinox of the Year 1728, to that of the Year 1729; containing the daily State of the Barometer, Thermometer, Wind and Weather, together with the Quantity of Rain during that Time. To this he annexes fome *felect* Meteorological and Aftronomical Obfervations, which he defcribes more at large.

The firft he takes Notice of is a remarkable *Halo* round the Moon, on *February* 20, 1728, at forty-five Minutes paft Seven in the Evening, when the Moon was not far diftant from the Meridian, and about her firft Quarter. The Diameter of the *Halo* occupied about 47 Degrees, being extended from 6 in *Procyon* to *Capella* towards the Weft. Its Arch was 4½ Deg. broad, as far, for Inftance, as α and 6 in *Procyon* are from each other. Within it was red, and towards the Extremity was pale ; exhibiting entire a beautiful

Spectacle